

## FLOW CONTROL ELEMENT INCLUDING ELASTIC MEMBRANE WITH PINHOLES

James W. Holley, Jr.

## ABSTRACT

A flow control element (e.g., a baby bottle nipple or a child sippy cup flow control valve) that includes a tube-like wall section defining a flow channel, and a substantially flat membrane supported by the wall section such that membrane impedes flow through the flow channel to an external region. The membrane punctured to form multiple, substantially round pinholes arranged in a two-dimensional pattern that remain closed to prevent fluid flow under normal atmospheric conditions, and open and to facilitate fluid flow rate through the membrane under an applied pressure differential (e.g., when sucked on by a child). The wall section has a greater rigidity than the membrane (which is formed from a relatively highly elastic material). Different sized pinholes are produced using different sized pins, thereby facilitating different flow rates in response to different applied pressure differentials. The pinholes are generated while stretching the membrane in a radial direction.